

**Testimony of
Sarah E. Hardy**

BEFORE THE DELAWARE PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE APPLICATION OF)
CHESAPEAKE UTILITIES CORPORATION)
FOR APPROVAL OF A CHANGE IN ITS)
GAS SALES SERVICE RATES ("GSR"))
TO BE EFFECTIVE NOVEMBER 1, 2013)

P.S.C. DOCKET NO. 13-

DIRECT TESTIMONY OF SARAH E. HARDY

On Behalf of Chesapeake Utilities Corporation

Delaware Division

Submitted for filing: September 3, 2013

1 Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.

2 A. My name is Sarah E. Hardy and I am a Regulatory Analyst II with Chesapeake
3 Utilities Corporation ("Chesapeake" or the "Company"). My business address is
4 350 S. Queen Street, Dover, Delaware 19904.

5

6 Q. BRIEFLY DESCRIBE YOUR EDUCATION AND RELEVANT PROFESSIONAL
7 BACKGROUND.

8 A. I received a Bachelor of Science degree in Business Administration with
9 concentrations in Management and Operations Management and a Minor in
10 International Business from the University of Delaware in Newark, Delaware, in
11 2005. I received a Masters of Business Administration from the University of
12 Delaware in Newark, Delaware, in 2009. I was hired by Chesapeake as a
13 Regulatory Analyst II in June 2010. As a Regulatory Analyst II, I have primarily
14 been involved in the areas of gas cost recovery, rate of return analysis, and
15 budgeting for the Delaware natural gas distribution company. Prior to joining
16 Chesapeake, I was employed by Conectiv Energy Supply, Inc. from July, 2005
17 until May, 2010, most recently as a Senior Accountant. As a Senior Accountant,
18 I was responsible for Conectiv Energy's derivatives accounting (including
19 preparation of derivatives disclosures for SEC reporting), Federal Energy
20 Regulatory Commission (FERC) filings, and other general accounting duties.

21

22 Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY IN THIS
23 PROCEEDING?

1 A. The purpose of my testimony is to discuss the mechanics of the three GSR
2 charges, explain the development of the firm and interruptible sales volumes and
3 total system requirements, and discuss the development of the unaccounted for
4 gas volumes. In addition, my testimony will support the overall calculation of the
5 Delaware Division's three proposed GSR charges to be effective with service
6 rendered on and after November 1, 2013, as well as the mechanics of the
7 Delaware Division's proposed balancing rates for transportation service under
8 the Large Volume Service ("LVS"), High Load Factor Service ("HLFS") and
9 Interruptible Service ("ITS") rate schedules. I will be illustrating the impact of the
10 proposed GSR charges on an average residential customer's bill and ensuring
11 compliance with the gas cost provisions outlined in previous Commission Orders.

12
13 Q. ARE THERE ANY SCHEDULES INCLUDED WITH YOUR DIRECT
14 TESTIMONY?

15 A. Yes. My direct testimony includes Schedules A.1, A.2, B, C.1, C.2, D.1, D.2, E,
16 F, G, H, I, J, L, M, and N. Schedule K, which is a comparison of Chesapeake's
17 GSR rates with those of other utilities in the area, will be submitted under
18 separate cover to the Commission within forty-five (45) days after filing this GSR
19 application, as required by Order 7607 issued on July 7, 2009, in PSC Docket
20 No. 08-269F.

21
22 Q. IS THE COMPANY FILING ANY OTHER DIRECT TESTIMONY IN THIS
23 PROCEEDING?

1 A. Yes. Chesapeake is also filing the direct testimony of Marie E. Kozel, Gas
2 Supply Analyst II. Ms. Kozel will be presenting testimony regarding the
3 Company's gas supply and procurement activities.
4

5 Q. WHAT PRESCRIBES THE METHODOLOGY FOR DETERMINING THE
6 COMPANY'S GAS SALES SERVICE RATES?

7 A. The three Gas Sales Service Rates proposed to be effective with service
8 rendered on and after November 1, 2013 have been developed in accordance
9 with the approved gas cost recovery mechanism as contained in the Delaware
10 Division's natural gas tariff, specifically Sheet Nos. 42 through 42.3.
11

12 Q. WHAT GAS SALES SERVICE RATE LEVELS ARE YOU PROPOSING IN THIS
13 PROCEEDING TO BE EFFECTIVE WITH SERVICE RENDERED ON AND
14 AFTER NOVEMBER 1, 2013?

15 A. The Company proposes the following Gas Sales Service Rates to be effective for
16 service rendered on and after November 1, 2013: \$1.008 per Ccf for customers
17 served under rate schedules RS-1, RS-2, GS, MVS, and LVS, \$0.536 per Ccf for
18 customers served under rate schedules GLR and GLO, and \$0.819 per Ccf for
19 customers served under rate schedule HLFS. Chesapeake is also proposing the
20 following balancing rates to be effective for service rendered on and after
21 November 1, 2013: \$0.072 per Ccf for transportation customers served under
22 rate schedule LVS, \$0.015 per Ccf for transportation customers served under

1 rate schedule HLFS, and \$0.001 per Ccf for transportation customers served
2 under rate schedule ITS.

3
4 Q WHAT EFFECT WILL THIS PROPOSED INCREASE IN THE GSR HAVE UPON
5 THE AVERAGE RESIDENTIAL HEATING CUSTOMER?

6 A. As compared to the rates that were in effect November 1, 2012, an average RS-2
7 customer using 700 Ccf per year will experience an annual increase of
8 approximately 0.7% or \$0.64 per month. During the winter heating season, a
9 typical RS-2 customer on Chesapeake's system using 110 Ccf per month will
10 experience an increase of approximately 0.8% or \$1.21 per winter month. A
11 typical RS-2 customer using 120 Ccf per winter month will experience an
12 increase of approximately 0.8% or \$1.32 per winter month.

13
14 Q. PLEASE DESCRIBE HOW YOU CALCULATED THE PROPOSED GAS SALES
15 SERVICE RATE LEVELS TO BE IMPLEMENTED IN THIS PROCEEDING.

16 A. The rates were calculated based on the estimated purchased gas costs and
17 estimated sales volumes for the twelve months ending October 31, 2014 and are
18 summarized on Schedule A.1. As shown on Schedule A.1, total projected firm
19 gas costs recoverable through the gas cost recovery mechanism are
20 \$37,947,851. This total is comprised of \$21,162,741 of fixed costs and
21 \$16,785,109 of variable costs. The three gas cost rates shown at the top of
22 Schedule A.1, which include a fixed rate (used to calculate separate demand
23 rates), a variable / commodity rate, and a total rate or system average rate, are

1 the key components for calculating separate Gas Sales Service Rates for
2 different services.

3
4 Q. CAN YOU BRIEFLY SUMMARIZE THE REASONS WHY THE THREE GSR
5 CHARGES ARE CHANGING FROM THE COMPANY'S PREVIOUS FILING?

6 A. The analysis of the change in gas costs and Gas Sales Service Rates from the
7 Company's last gas cost recovery filing is summarized on Schedule E. As
8 shown on this schedule, variable or commodity gas costs are anticipated to
9 increase by \$1,362,028 since the last GSR filing. The variable costs contained in
10 this filing are increasing primarily due to the projected cost of flowing commodity
11 gas for the upcoming year increasing from the flowing commodity gas costs
12 included in the previous GSR filing with rates effective on and after November 1,
13 2013 as well as an increase in projected volumes.

14 As shown on this schedule, fixed costs are anticipated to increase by \$755,282
15 since November 1, 2012, the date of the last change in the Company's GSR.
16 The increase in fixed gas costs is mainly attributable to changes in capacity
17 entitlements, as discussed in the direct testimony of Marie E. Kozel.

18 This results in an increase in the system average cost per Ccf of \$1.057 per Ccf
19 in this filing versus \$1.042 in the November 1, 2012 filing.

20
21 Q. PLEASE DESCRIBE THE PROCESS THE COMPANY USED TO DETERMINE
22 ITS GSR LEVELS AND THE VARIOUS COMPONENTS OF THE DELAWARE
23 DIVISION'S GSR CALCULATIONS AS SHOWN ON SCHEDULE A.1.

1 A. Schedule A.1 is a summary of the calculation of the three proposed GSR levels.
2 The calculations of the proposed GSR levels have been made in accordance
3 with the provisions set forth in the Delaware Division's GSR tariff clause. The
4 process to determine the GSR charges consists of three major steps:

- 5 1. Develop the sales and associated gas supply requirements forecast.
- 6 2. Forecast supplier rates and calculate annual purchased gas costs
7 associated with serving the Company's firm sales customers.
- 8 3. Derive the GSR charges utilizing the results of the first two steps and the
9 process below:

10 Step 3 is summarized on Schedule A.1. Initially, three gas cost rates must be
11 established to calculate the three separate GSR charges: a fixed rate, a
12 commodity rate and a system average rate. Based on total firm gas costs
13 recoverable through the gas cost recovery mechanism for the GSR levels to be
14 effective November 1, 2013, the three gas cost rates are calculated as follows:

15	Fixed Rate - \$24.86/ Ccf	(Total fixed costs of \$21,162,741 divided
16		by the firm peak day capacity
17		requirements of 851,380 Ccf)
18	Commodity Rate - \$0.468 / Ccf	(Total firm commodity costs of
19		\$16,785,109 divided by firm sales
20		volumes of 35,898,652 Ccf for the
21		period November 2013 through October
22		2014)

1 System Average Rate - \$1.057 / Ccf (Divide total firm gas costs of
2 \$37,947,851 by the firm sales volume of
3 35,898,652 Ccf)

4 From these three rates, different methodologies are applied in order to calculate
5 the Gas Sales Service Rates that more closely align the Gas Sales Service
6 Rates with actual gas costs identified for providing services associated with
7 different rate schedules or customer classes.

8
9 Q. PLEASE EXPLAIN THE THREE METHODOLOGIES UTILIZED TO
10 CALCULATE THREE SEPARATE GAS SALES SERVICE RATES USING THE
11 FIXED RATE, COMMODITY RATE AND SYSTEM AVERAGE RATE AS
12 PREVIOUSLY DESCRIBED.

13 A. Schedule A.1 also provides a summary of the development of the three separate
14 Gas Sales Service Rates by applying the tariff language described in the
15 Delaware Division's tariff on Sheet No. 42.2.

16 Rate Schedule HLFS

17 This GSR charge, applicable to any customer qualifying for High Load Factor
18 Service (HLFS), is calculated based on the combination of a weighted average
19 demand and commodity rate developed on an overall 60.83% load factor for the
20 customer class and the overall system weighted average cost rate. The 60.83%
21 load factor is included on Schedule J. This means that the fixed gas cost rate of
22 \$24.86 per Ccf, as previously described, is divided by 222 days (60.83% of 365
23 days in a year) to calculate a demand rate of \$0.112 per Ccf. This rate is then

1 added to the commodity rate, as previously described, of \$0.468 per Ccf to
2 calculate a volumetric rate of \$0.580 per Ccf. The arithmetic average of this
3 volumetric rate (\$0.580 per Ccf) and the system average rate (\$1.057 per Ccf) is
4 \$0.819 per Ccf, which equals the GSR charge for HLFS customers. Total costs
5 associated with HLFS (\$2,291,780) are projected by multiplying the GSR charge
6 (\$0.819 per Ccf) by the projected sales volumes for HLFS (2,798,266 Ccf).

7 Rate Schedules GLO and GLR

8 All customers served under these Gas Lighting rate schedules will be subject to
9 the same GSR charge. This rate is calculated using weighted average demand
10 and commodity rates through a single gas cost rate per Ccf, based on a 100%
11 load factor. The demand rate of \$0.068 per Ccf ($\$24.86 / 365$) plus the
12 commodity rate of \$0.468 per Ccf, produces a GSR charge of \$0.536 per Ccf.
13 Total costs associated with Gas Lighting Services of \$665 are a result of
14 multiplying the \$0.536 per Ccf GSR charge by the annual sales volumes for
15 these services of 1,240 Ccf.

16 Rate Schedules RS-1, RS-2, GS, MVS and LVS

17 These rate schedules are assigned the remaining firm purchased gas costs after
18 the firm purchased gas costs have been calculated for the above mentioned rate
19 schedules ($\$37,947,851 - \$2,291,780 - \$665 = \$35,655,406$). Associated costs
20 are divided by the remaining volume ($35,898,652 - 2,798,266 - 1,240 =$
21 $33,099,146$) to develop a rate of \$1.077 per Ccf, less the portion of any shared
22 margins (\$0.069 per Ccf) as shown on Schedule A.2. All customers served

1 under rate schedules RS-1, RS-2, GS, MVS and LVS will be charged \$1.008 per
2 Ccf for service rendered on and after November 1, 2013.

3

4 Q. PLEASE DEFINE THE TERM "SHARED MARGINS".

5 A. Shared Margins are defined as any margins that the Company receives as a
6 result of interruptible transportation service, off system sales or capacity
7 releases. There are different thresholds for sharing each type of margins
8 received.

9

10 Q. PLEASE DESCRIBE THE EFFECTIVE MARGIN SHARING PERIOD AND THE
11 THRESHOLDS THAT HAVE BEEN APPROVED BY THE COMMISSION.

12 A. Pursuant to the settlement agreement reached in PSC Docket 12-450F, the
13 Company will retain 7.5% of all capacity release credits received from the
14 Company's Asset Manager and credit 92.5% to the firm ratepayers. Also, as
15 outlined in the settlement agreement reached in PSC Docket No. 09-398F, the
16 Company is permitted to retain 100% of all interruptible transportation margins up
17 to \$675,000 per year and 10% of all interruptible transportation margins over
18 \$675,000 per year. As shown on Schedule A.2, the Company is not projected to
19 reach the sharing threshold for interruptible transportation margins in this twelve
20 month determination period. Schedule A.2 does show the calculation of the
21 \$0.069 per Ccf margin sharing rate, proposed to be effective November 1, 2013,
22 as a result of the sharing of the capacity valuation credit from the Asset Manager.
23 The Company is not projecting any off system sales for this determination period.

1 Q. IN THIS FILING, WAS THE FULL BENEFIT OF PROJECTED CAPACITY
2 RELEASES TO TRANSPORTATION CUSTOMERS ON EASTERN SHORE
3 NATURAL GAS COMPANY'S ("EASTERN SHORE") SYSTEM CREDITED TO
4 THE DELAWARE DIVISION FIRM RATEPAYERS?

5 A. Yes. The Company believes, as stated in prior GSR filings, that crediting 100%
6 of the revenue received from capacity released to the Delaware Division's
7 transportation customers to the firm sales customers is appropriate due to the
8 market on Eastern Shore for this capacity. The Company has estimated this
9 capacity release value to be \$4,770,740 for the twelve-month period ending
10 October 2014 as calculated on Schedule I and shown as a reduction to fixed
11 demand costs on Schedule B. The total peak day firm entitlements on Eastern
12 Shore are projected to be 71,754 Dts per day for this determination period of
13 which 17,944 Dts per day of Daily Contract Quantity entitlements are projected to
14 be released to transportation customers, or approximately twenty-five percent
15 (25%) of the Delaware Division's peak day capacity on the Eastern Shore
16 pipeline.

17
18 Q. AS INDICATED IN YOUR TESTIMONY, THE FIRST STEP IN CALCULATING
19 THE PROPOSED GSR CHARGES IS THE DEVELOPMENT OF THE SALES
20 AND ASSOCIATED GAS SUPPLY REQUIREMENTS FORECAST. HOW ARE
21 THE SALES AND SUPPLY REQUIREMENTS FORECASTS DEVELOPED IN
22 THIS PROCEEDING?

1 A. A forecast of purchased gas costs must start with a forecast of demand or sales
2 volumes for the Company's distribution system. Based on meeting the sales
3 forecast, the Company develops a forecast of the associated purchases or
4 supply requirements. For the purpose of this proceeding, the sales forecast
5 began with an analysis of the major variables that affect sales volumes. These
6 variables include such items as the number of customers to be served, the rate
7 schedule classification of those customers (i.e. large volume, high load factor,
8 etc.), temperature, and the larger individual commercial and industrial customer
9 sales volumes or demands. Sales volumes are normalized based on a ten-year
10 average of degree days for the months of July 2004 through June 2013.

11
12 Q. HAS A SCHEDULE BEEN INCLUDED SETTING FORTH THE ESTIMATED
13 VOLUMES OF GAS TO BE BILLED TO CUSTOMERS DURING THIS PERIOD?

14 A. Yes. Schedule C.1 shows Chesapeake's projected sales volumes by customer
15 class for the determination period of the twelve months ending October 31, 2014.

16
17 Q. PLEASE DISCUSS FURTHER THE DEVELOPMENT OF THE SALES
18 FORECAST SHOWN ON SCHEDULE C.1

19 A. Forecasted sales were used for the entire twelve-month period of November
20 2013 through October 2014. Forecasted sales were developed based upon the
21 actual sales volumes billed to each customer class during each month for the
22 prior year with adjustments to reflect average temperature, customer growth and
23 customers switching among rate classes.

1 Q. HOW ARE THESE CUSTOMER ADJUSTMENTS REFLECTED IN THE TWO
2 RESIDENTIAL SERVICE CLASSES?

3 A. For the twelve month period ending October 31, 2014, the Company has
4 projected an increase of approximately 1,690 RS-2 customers over the current
5 GSR determination period, with the majority of the increase representing growth
6 in new customers. For the twelve month period ending October 31, 2014, the
7 Company has projected a decrease of approximately 249 RS-1 customers from
8 the current GSR determination period. This decrease is primarily the result of
9 reclassification of customers from RS-1 to RS-2.

10

11 Q. HOW ARE THESE CUSTOMER ADJUSTMENTS REFLECTED IN THE FIRM
12 COMMERCIAL AND INDUSTRIAL CLASSES?

13 A. With respect to the Commercial and Industrial customers, the Company projects
14 an overall increase of approximately 128 customers over the previous twelve-
15 month period.

16

17 Q. PLEASE DISCUSS ANY OTHER FIRM CUSTOMER ADJUSTMENTS.

18 A. With respect to the number of Gas Lighting customers, no significant changes
19 are projected during this twelve-month period.

20

21 Q. DOES THE COMPANY HAVE ANY PROJECTIONS FOR THE NUMBER OF
22 FIRM COMMERCIAL AND INDUSTRIAL CUSTOMERS THAT MAY CHOOSE

1 TO TRANSPORT ON ITS DISTRIBUTION SYSTEM AND THE VOLUMES
2 ASSOCIATED WITH THESE CUSTOMERS FOR THIS PERIOD?

3 A. Yes. The Company has not included in its projections any firm commercial or
4 industrial customers switching from sales service to transportation service during
5 the determination period. This filing includes projections for gas to be
6 transported on the Company's distribution system for those customers who are
7 currently receiving transportation service based on the Company's current
8 eligibility requirements, as well as new natural gas customers that the Company
9 anticipates will choose transportation service. There are 266 firm commercial /
10 industrial customers and two (2) interruptible commercial / industrial customers
11 who will be transporting their own gas on the Delaware Division's distribution
12 system. The Company has estimated the firm commercial / industrial
13 transportation volumes to be approximately 3,843,569 Mcf and the interruptible
14 commercial / industrial transportation volumes to be approximately 95,560 Mcf
15 during this period. The estimated firm commercial / industrial transportation
16 volume is an increase over the projection from the previous GSR filing which was
17 3,579,385 Mcf.

18
19 Q. PLEASE EXPLAIN HOW THE PROJECTED SALES VOLUMES WERE USED
20 TO CALCULATE THE ASSOCIATED GAS SUPPLY REQUIREMENTS NEEDED
21 BY THE DELAWARE DIVISION DURING THE DETERMINATION PERIOD.

22 A. Using the projected sales volumes from Schedule C.1 as a starting point,
23 adjustments due to cycle billing, unaccounted for gas, pressure compensation

1 and company use gas were derived in order to calculate the total gas supply
2 requirements for the period.
3

4 Q. PLEASE EXPLAIN THE CYCLE BILLING ADJUSTMENT AS SHOWN ON
5 SCHEDULE C.1.

6 A. All sales volume projections included in this GSR filing are associated with a
7 respective billing month while the Delaware Division's purchases are recorded on
8 a calendar month basis. Chesapeake includes a cycle billing adjustment in its
9 calculation of the GSR charges for the purpose of accounting for the difference
10 between a billing month and a calendar month. The cycle billing adjustment is
11 calculated by first dividing the projected, normalized firm sales volumes for each
12 month into a base load and a heating load. The heating load is then multiplied by
13 the difference between the normal calendar month degree days and the normal
14 billing month degree days to calculate the cycle billing adjustment.
15

16 Q. WHAT IS THE LEVEL OF COMPANY USE GAS PROJECTED DURING THE
17 DETERMINATION PERIOD?

18 A. Company Use Gas is projected to be 1,591 Mcf for this determination period.
19 This projection is approximately the same level of volume experienced by the
20 Company during the actual twelve months ended June 30, 2013.
21

22 Q. PLEASE EXPLAIN HOW YOU CALCULATED THE PROJECTED
23 UNACCOUNTED FOR GAS AS SET FORTH IN SCHEDULE C.1.

1 A. An unaccounted for gas volume of 73,672 Mcf has been projected for the twelve
2 months ending October 31, 2014. Unaccounted for gas is calculated by
3 multiplying the respective sales volumes for each month by 3.59% and
4 subtracting the estimated Company Use and Pressure Compensation for the
5 month. The 3.59% utilized in this GSR calculation includes volumes attributed to
6 metering pressure differential and is representative of five-year history of
7 unaccounted for gas volumes. The use of a five year history of unaccounted for
8 gas volumes was approved by the Public Service Commission by Order No.
9 4189 in PSC Docket No. 95-206.

10
11 Q. PLEASE EXPLAIN HOW YOU CALCULATED THE PROJECTED PRESSURE
12 COMPENSATION VOLUMES AS SET FORTH IN SCHEDULE C.1.

13 A. The pressure compensation projection of 53,617 Mcf is calculated by multiplying
14 the total projected Mcf sales by the factor 0.0149355. This factor represents the
15 calculation used to pressurize gas received from Eastern Shore to a standard
16 pressure of 14.73 PSI for delivery on the Company's distribution system.

17
18 Q. PLEASE EXPLAIN HOW YOU CALCULATED THE PROJECTED COST OF
19 FIRM SALES FOR THE TWELVE-MONTH PERIOD ENDING OCTOBER 31,
20 2014.

21 A. The projected cost of firm sales is detailed on a monthly basis throughout the
22 seven pages of Schedule C.2. In calculating the proposed cost of gas for the
23 period November 1, 2013 through October 31, 2014, the total projected supply

1 requirements were allocated between the different categories of gas (commodity
2 and storage) available to meet the projected demand. Pages 1 and 2 of
3 Schedule C.2 primarily calculate the fixed costs of firm transportation on
4 Columbia Gas Transmission ("Columbia"), Columbia Gulf Transmission
5 ("Columbia Gulf"), Transcontinental Gas Pipe Line ("Transco"), Eastern Shore,
6 and Texas Eastern Transmission ("TETCO"). A summary of storage demand
7 and capacity charges is also included on these two pages. Pages 3, 4 and 5
8 calculate the gas commodity costs associated with firm transportation service.
9 As summarized on Page 4 of Schedule C.2, the projected cost of storage gas
10 commodity for withdrawals during this period has been calculated using the
11 actual purchases and costs for the months of April 2013 through July 2013 and
12 projected purchases and costs for August 2013 through October 2013. The
13 twelve-month period ending March 2014 is used for the calculation of the storage
14 gas demand cost to properly reflect the amounts to be expensed during the
15 determination year. The rates used in the commodity gas purchase projections
16 for flowing commodity gas for November 2013 through October 2014 are based
17 on natural gas commodity futures market prices during the first week of August
18 2013, as well as any gas that had been previously purchased under the
19 Company's "Natural Gas Commodity Procurement Plan" for this determination
20 period.

21
22 Q. PLEASE EXPLAIN THE CHANGE IN THE PROJECTED FIRM COST OF GAS
23 FOR THE TWELVE MONTHS ENDING OCTOBER 31, 2014 AS SHOWN ON

1 SCHEDULE F COMPARED TO NINE MONTHS OF ACTUAL COSTS AND
2 THREE MONTHS OF PROJECTED COSTS FOR THE TWELVE-MONTH
3 PERIOD ENDING OCTOBER 31, 2013.

4 A. Schedule F compares the projected firm cost of gas for the twelve months ending
5 October 31, 2014 utilized in this proceeding to the nine months of actual gas
6 costs and three months of projected gas costs for the twelve-month period
7 ending October 31, 2013. In addition, for informational purposes, the actual firm
8 cost of gas for the three prior determination periods ended October 2012, 2011,
9 and 2010 are shown. Chesapeake anticipates a decrease in firm gas costs per
10 Mcf from \$10.6827 per Mcf to \$10.4854 per Mcf or a \$0.1973 per Mcf decrease
11 for the twelve months ending October 31, 2014. As indicated on Schedule F, the
12 \$0.1973 per Mcf decrease is mainly attributable to an increase in the total firm
13 sales projected for the twelve months ended October 31, 2014.

14
15 Q. PLEASE EXPLAIN SCHEDULES D.1 AND D.2 IN THIS GSR FILING.

16 A. Schedule D.1 sets forth the calculation of the purchased gas over/under
17 collection by month for the twelve-month period ending October 31, 2013. The
18 projected under collection balance at October 31, 2013 that is carried forward
19 into this annual filing is \$1,814,832.

20 Schedule D.2 reflects the shared margins over/under refund for the twelve-month
21 determination period ending October 31, 2013. Based on this twelve-month
22 determination period, the Company's under refunded shared margins are

1 \$332,372. This amount is also included in the shared margin calculation on
2 Schedule A.2.

3
4 Q. PURSUANT TO THE PROVISIONS OF THE TARIFF CONCERNING THE
5 UNACCOUNTED FOR GAS INCENTIVE MECHANISM APPROVED BY ORDER
6 NO. 3648, THE COMPANY AS PART OF ITS ANNUAL GSR FILING IS
7 REQUIRED TO PROVIDE THE COMMISSION STAFF WITH ACTUAL
8 UNACCOUNTED FOR GAS VOLUMES FOR THE PRECEDING TWELVE
9 MONTH PERIOD ENDED JULY 31. HAS THE COMPANY INCLUDED A
10 SCHEDULE SHOWING THE REQUIRED INFORMATION?

11 A. Yes. Schedule G represents the actual unaccounted for gas volumes for the
12 twelve months ended July 31, 2013.

13
14 Q. WHAT WERE THE UNACCOUNTED FOR GAS TARGET PERCENTAGE AND
15 DEAD BAND PERCENTAGES APPROVED FOR THE UNACCOUNTED FOR
16 GAS INCENTIVE MECHANISM IN PSC DOCKET NO. 92-87F?

17 A. The Unaccounted For Gas Target approved was 3.20% of total gas sendout or
18 total gas requirements. The Dead Band approved was +/- 0.5% points around
19 the 3.20% target level. Unaccounted For Gas Volumes that are within 2.70% to
20 3.70% of total gas sendout are considered to be within this band and meeting the
21 objectives of this mechanism.

1 Q. WHAT WAS THE ACTUAL LEVEL OF UNACCOUNTED FOR GAS VOLUMES
2 FOR THE TWELVE MONTHS ENDED JULY 31, 2013 COMPARED TO THE
3 INCENTIVE MECHANISM TARGETS?

4 A. The actual unaccounted for gas percentage, as established by the approved
5 guidelines in PSC Docket No. 92-87F, for the twelve months ended July 31,
6 2013, was 0.72% of total gas requirements. This percentage is under the
7 targeted percentage of 3.20% and is also under the dead band range of 2.70% to
8 3.70%.

9
10 Q. EARLIER IN THIS TESTIMONY YOU MENTIONED THAT YOU WERE
11 PROPOSING A CHANGE TO THE DELAWARE DIVISION'S FIRM BALANCING
12 RATES FOR TRANSPORTATION CUSTOMERS BEING SERVED UNDER
13 RATE SCHEDULES "LVS" AND "HLFS". PLEASE EXPLAIN WHY THE
14 CHANGES TO THE GAS SALES SERVICE RATES AND THE BALANCING
15 RATES ARE BEING PROPOSED IN THE SAME DOCKET.

16 A. Chesapeake's firm transportation balancing rates are calculated in accordance
17 with the methodology approved in PSC Docket No. 95-73, Phase II, by Order No.
18 4400 and are based on Chesapeake's annual purchased gas costs. As a result
19 of this order, Chesapeake is required to update its balancing rates for Rate
20 Schedules "LVS" and "HLFS" on an annual basis at the time of its annual Gas
21 Sales Service Rate application. Chesapeake also agreed to update its balancing
22 rate for "ITS" during its annual Gas Sales Service application as a result of Order
23 No. 7434 issued on September 2, 2008 in PSC Docket No. 07-186.

1 The relationship between the GSR charges and the transportation balancing
2 rates exist because the gas costs being presented in this GSR filing are the
3 same gas costs that are used to calculate the transportation balancing rates.
4

5 Q. PLEASE STATE THE BALANCING RATES THAT ARE BEING PROPOSED IN
6 THIS FILING.

7 A. Chesapeake is proposing an increase in the current firm balancing rate for
8 transportation customers served under Rate Schedule "LVS" from \$0.063 per Ccf
9 to \$0.072 per Ccf to be effective for service rendered on and after November 1,
10 2013. The Company is proposing a decrease in the firm balancing rate for
11 transportation customers served under Rate Schedule "HLFS" from \$0.022 per
12 Ccf to \$0.015 per Ccf to be effective for service rendered on and after November
13 1, 2013. The Company is proposing no change to the current interruptible
14 balancing rate for transportation customers served under Rate Schedule "ITS" of
15 \$0.001 per Ccf.
16

17 Q. WHAT IS THE PRIMARY REASON FOR THE CHANGES IN THE BALANCING
18 RATES THAT ARE BEING PROPOSED?

19 A. The primary reason for the decrease in the firm balancing rate for transportation
20 customers served under Rate Schedule "HLFS" is an increase in the annual load
21 factor for the class from 50.23% in the last filing to 60.83% as shown on
22 Schedule J. The primary reason for the increase in the firm balancing rate for
23 transportation customers served under Rate Schedule "LVS" is the increase in

1 the average design day cost per Dt for the fixed gas supply resources from
2 \$0.6023 to \$0.6936.

3
4 Q. WHAT GAS SUPPLY RESOURCES IS THE COMPANY USING IN
5 DEVELOPING THE BALANCING SERVICE RATES BEING SUBMITTED IN
6 THIS FILING?

7 A. Schedule J, Page 1 of 4 shows the Delaware Division's gas supply resources
8 being used in developing the balancing service rates along with the purchased
9 gas costs associated with these gas supply resources. All of these resources
10 provide firm deliveries that vary in daily entitlements and duration.

11 Q. PLEASE BRIEFLY EXPLAIN HOW THE OVERALL COSTS OF THE GAS
12 SUPPLY RESOURCES WERE DEVELOPED ON SCHEDULE J.

13 A. The Delaware Division's gas costs associated with the gas supply resources for
14 balancing services are based on the same costs contained in the development of
15 the GSR charges. The gas supply resources and their costs are separated into
16 fixed gas supply resources and variable gas supply resources. The Delaware
17 Division's storage demand and capacity, and propane peak shaving facilities are
18 related to the fixed gas supply resources, while storage injection and withdrawal
19 volumes are related to the variable gas supply resources.

1 Q. HOW WAS THE AVERAGE ANNUAL RATE OF APPROXIMATELY \$133.30
2 PER DT FOR THE FIXED GAS SUPPLY RESOURCES DETERMINED ON
3 SCHEDULE J, PAGE 1 OF 4?

4 A. The gas costs were determined for each of the fixed gas supply resources to be
5 used by the Company in performing this balancing service. The total annualized
6 gas supply costs of \$3,629,124 were divided by the daily entitlements of 27,225
7 Dts to derive the annual amount of \$133.3012 per Dt for these fixed gas supply
8 resources in the balancing service.

9
10 Q. HOW WAS THE COST OF THE VARIABLE GAS SUPPLY RESOURCES
11 DETERMINED IN THIS PROCEEDING?

12 A. The overall variable rate of \$0.0109 per Dt was determined based on the current
13 storage injection and withdrawal capacities of the Delaware Division's storage
14 resources. This rate was cut in half to arrive at separate rates for injections and
15 withdrawals. This is important because a transportation customer on any given
16 day will either over deliver (the Company would inject the excess gas into
17 storage) or under deliver (the Company would withdraw from storage to meet the
18 demand) the customer-owned gas into the system on the customer's behalf. The
19 resulting rate used for the variable gas supply component of the balancing
20 services is \$0.0109 per Dt.

1 Q. WERE THESE OVERALL FIXED GAS SUPPLY RESOURCE COSTS AND
2 VARIABLE GAS SUPPLY RESOURCE COSTS UTILIZED IN THE
3 DEVELOPMENT OF THE BALANCING SERVICE RATES?

4 A. Yes. The variable gas supply rate was used as the basis for the variable
5 component in developing the balancing service rates. The fixed gas supply rate
6 will differ between the balancing services due to the specific nature of the service
7 being provided and the fact that the balancing rate is charged on consumption,
8 not just the imbalance volumes. The fixed gas supply portion of the balancing
9 service rates is based on specific load factors along with the percentage of the
10 Company's gas supply needed to balance the requirements of specific customer
11 class requirements. This percentage of the Company's gas supply will be the
12 difference between their average day requirements and design day
13 requirements.

14
15 Q. HOW WAS THE FIRM BALANCING SERVICE RATE FOR LARGE VOLUME
16 SERVICE DEVELOPED?

17 A. Schedule J, Page 2 of 4 shows the development of the firm balancing service
18 rate for this specific transportation customer class. The Delaware Division
19 developed an average cost from the fixed rate of \$133.3012 per Dt based on the
20 Large Volume load factor of 24.02%. This load factor resulted in an average cost
21 of \$1.5148 per Dt. Since the Company's analysis determined that the DCQ
22 method would provide approximately 54.21% of the peak day requirements, the
23 Company would need to supply the remaining 45.79% with its gas supply

1 resources. In other words, these firm customers would pay for 45.79% of peak
2 day requirements through the balancing service rate. The resulting rate for the
3 fixed capacity based on this 45.79% would be approximately \$0.6936 per Dt
4 applicable to all consumption. The variable commodity rate of \$0.0109 per Dt
5 was multiplied by the estimated imbalance volume percentage of 17.41% to
6 derive the variable rate of \$0.0019 per Dt. The fixed capacity rate was added to
7 the variable commodity rate to develop the final rate per Dt, which was then
8 converted to a Mcf rate and Ccf rate as shown on Schedule J, page 2 of 4. The
9 resulting balancing rate for the LVS rate schedule is \$0.072 per Ccf.

10
11 Q. HOW WAS THE FIRM BALANCING SERVICE RATE FOR HIGH LOAD
12 FACTOR SERVICE DEVELOPED?

13 A. Schedule J, Page 3 of 4 shows the development of the firm balancing service
14 rate for this specific transportation customer class. The Delaware Division
15 developed an average cost from the fixed rate of \$133.3012 per Dt based on the
16 High Load Factor Service load factor of 60.83%. This load factor resulted in an
17 average cost of \$0.6005 per Dt. Since the Company's analysis determined that
18 the DCQ method would provide approximately 76.33% of the peak day
19 requirements for this class, the Company would need to supply the remaining
20 23.67% with its gas supply resources which the transportation customers would
21 pay for through the balancing service rate. The resulting rate for the fixed
22 capacity based on this 23.67% would be approximately \$0.1421 per Dt
23 applicable to all consumption. The variable commodity rate of \$0.0109 per Dt

1 was multiplied by the estimated imbalance volume percentage of 3.50% to derive
2 the variable rate of \$0.0004 per Dt. The fixed capacity rate was added to the
3 variable commodity rate to develop the final rate per Dt, which was then
4 converted to a Mcf rate and Ccf rate as shown on Schedule J, page 3 of 4. The
5 resulting balancing rate for the HLFS rate schedule is \$0.015 per Ccf.

6
7 Q. WHAT ABOUT THE BALANCING RATE FOR INTERRUPTIBLE CUSTOMERS?

8 A. Schedule J, Page 4 of 4 shows the development of the balancing service rate for
9 this specific transportation customer class. The Delaware Division developed an
10 average cost from the fixed rate of \$133.3012 per Dt based on the Interruptible
11 Transportation Service load factor of 100%. This load factor resulted in an
12 average cost of \$0.3652 per Dt. The rate for the fixed capacity based on
13 average cost at 1.00% would be approximately \$0.0037 per Dt applicable to all
14 consumption. The variable commodity rate of \$0.0109 per Dt was multiplied by
15 the estimated imbalance volume percentage of 11.11% to derive the variable rate
16 of \$0.0012 per Dt. The fixed capacity rate was added to the variable commodity
17 rate to develop the final rate per Dt, which was then converted to a Mcf rate and
18 Ccf rate as shown on Schedule J, page 4 of 4. The resulting balancing rate for
19 the ITS rate schedule is \$0.001 per Ccf, which is the current rate for this
20 customer class. Accordingly, no change is being proposed.

1 Q. DOES THE COMPANY'S APPLICATION CONTAIN ADDITIONAL
2 INFORMATION IN ORDER TO COMPLY WITH PRIOR COMMISSION
3 ORDERS?

4 A. Yes. The Company's filing contains support in compliance with Commission
5 Orders issued over the past few years which I will discuss in greater detail.
6

7 Q. AS A RESULT OF THE SETTLEMENT AGREEMENT REACHED IN PSC
8 DOCKET NO. 12-450F, WHAT INFORMATION WAS THE COMPANY TO
9 INCLUDE IN THIS FILING?

10 A. As a result of the settlement agreement in the last GSR proceeding, the
11 Company agreed to the following as part of this GSR application process:

12

13 1) The Company agreed that the margin sharing mechanism related to the capacity
14 valuation credit received from the Asset Manager would be modified so that
15 Chesapeake would retain seven and one-half percent (7.5%) of the credits
16 received by the Asset Manager, and credit the remaining ninety two and one-half
17 percent (92.5%) to the GSR rates, effective June 1, 2013.

18 2) Chesapeake shall be allowed to continue to recover the Texas Eastern capacity
19 costs and the ESNG capacity costs associated with the Texas Eastern
20 interconnect. With respect to any capacity release revenues received outside of
21 an Asset Management Agreement associated with this capacity, one hundred
22 percent (100%) of any capacity release revenues associated with the release of
23 this capacity will be credited to the GSR.

- 1 3) The Company agreed that no part of any fees paid to Planalytics, Inc. for the use
2 of their EnergyBuyer software in connection with the Company's pilot hedging
3 program will be recovered in the Company's GSR rates and that a true-up would
4 be made in this year's GSR Application to offset the costs of \$50,000 included in
5 the prior year's GSR filing.
- 6 4) At the time of the last GSR filing, the Company experienced an increase in the
7 unaccounted-for-gas cost ("UFG"). The Company agreed to continue to
8 investigate the source(s) of the prior increase in UFG and file with the
9 Commission a written report of the Company's final findings on or before the date
10 on which the Company files its next GSR application.
- 11 5) The Company agreed to submit a regulatory filing on or before October 1, 2013,
12 in which the Company will propose changes to its current transportation program
13 mechanics for commercial and industrial customers and which will propose an
14 alternative approach regarding the allocation of the cost of upstream pipeline
15 capacity to transportation customers.
- 16 6) As agreed in prior dockets, the Company will continue with the following
17 practices: (a) the Company will notify the parties of any supplier refunds that may
18 impact the GSR charges; (b) the Company will continue to include in future GSR
19 applications an update on steps taken to mitigate the effects of changes in gas
20 costs; (c) the Company will provide information on the total sales volumes, costs,
21 and margins by month for Interruptible Gas Transportation sales as part of its
22 GSR applications; and (d) the Company will calculate the impact on its proposed
23 GSR rates had a thirty-year average degree days been used and provide such

1 information to the Staff and DPA as part of the discovery process, when and if
2 requested.

3
4 Q. HAS THE COMPANY COMPLIED WITH THE SETTLEMENT PROVISIONS AS
5 PART OF THIS GSR APPLICATION PROCESS?

6 A. Yes. With respect to the first item listed concerning the change in the Company's
7 margin sharing mechanism for the capacity valuation credit received from its
8 Asset Manager, the Company began crediting ninety two and one-half percent
9 (92.5%) to firm sales customers through the GSR in June 2013. Schedule D.2
10 shows this change for the months June 2013 through October 2013; Schedule
11 A.2 shows the projected amount of margin sharing for the upcoming
12 determination period which is expected to be \$1,965,625.

13 With respect to the second item listed, the Company has not projected any
14 capacity release revenues associated with the Texas Eastern capacity for the
15 GSR period that is to be received outside the Asset Management Agreement.
16 However, any future capacity release revenues associated with this capacity that
17 are received outside of an Asset Management Agreement will be credited 100%
18 to the ratepayers through the margin sharing mechanism.

19 With respect to the third item listed, the Company has included a true-up on
20 Schedule B that removes the \$50,000 cost of the Planalyics, Inc. EnergyBuyer
21 software that was included in the prior year's GSR filing.

22 With respect to the fourth item listed regarding the Company's level of
23 unaccounted-for gas, the Company has been continuing its investigation into the

1 cause(s) of the increase in the levels of unaccounted-for gas experienced at the
2 time of the prior year's GSR filing. The Company will be filing a report,
3 concurrently with this GSR application and under separate cover, on its
4 investigation and some of the steps it has taken to remedy the situation to bring
5 the level of unaccounted-for gas to a more acceptable level.

6 With respect to the fifth item listed, the Company will be making a regulatory
7 filing, as described, on or before October 1, 2013

8
9 Q. PLEASE ADDRESS THE REMAINING SETTLEMENT PROVISION ITEMS
10 FROM THE LAST GSR TO BE COVERED IN THIS APPLICATION.

11 A. With respect to supplier refunds, the Company has included an estimate of
12 \$435,000 related to a pending Transco refund based on its most recent rate case
13 filed with FERC. With respect to gas cost change mitigation measures, the
14 Company continues to encourage its customers to enroll in its budget billing
15 program. The program provides for even monthly payments for the period of
16 September through May. If necessary, these monthly payments are adjusted
17 midway through the winter in an attempt to avoid large credit or debit balances at
18 the end of the budget period. The Company has included messages on its
19 customers' bills during the summer months, encouraging customers to sign up
20 for the program which begins in September. Additionally, the Company
21 continues to promote conservation by including conservation tips on its
22 customers' bills, as part of its customer guides (which are sent to each residential

1 customer prior to every winter), and on a pamphlet made available in its Dover
2 office.

3
4 Q. AS A RESULT OF THE SETTLEMENT AGREEMENT REACHED IN PSC
5 DOCKET NO. 09-398F, WHAT INFORMATION WAS THE COMPANY TO
6 INCLUDE IN THIS FILING?

7 A. As a result of the settlement agreement in that GSR proceeding, the Company
8 agreed to include the following provision:

9 1) Effective November 1, 2010, the Settling Parties agreed to a margin
10 sharing mechanism whereby Chesapeake retains 100% of the
11 interruptible transportation margins up to \$575,000, (the amount included
12 in Chesapeake's currently authorized firm base rates). Chesapeake will
13 also retain 100% of the next \$100,000 of interruptible transportation
14 margins. Thereafter, Chesapeake will credit to the GSR 90% of
15 interruptible transportation margins over \$675,000, with the Company
16 retaining 10% of margins over \$675,000.

17
18 Q. PLEASE EXPLAIN HOW THE COMPANY COMPLIED WITH THE MARGIN
19 SHARING SETTLEMENT PROVISIONS FROM PSC DOCKET NO. 09-398F?

20 A. For the determination period ending October 2013, the Company's projected
21 level of interruptible margins is not expected to exceed the threshold whereby
22 margin would be shared; however if actual interruptible margins received exceed

1 \$675,000 during the determination period, the Company will share those margins
2 with the firm ratepayers according to the margin sharing mechanism.
3

4 Q. HAS THE COMPANY PROVIDED TOTAL SALES VOLUMES, COSTS, AND
5 MARGINS BY MONTH FOR ITS INTERRUPTIBLE TRANSPORTATION
6 CUSTOMERS?

7 A. Yes. The settlement agreement in PSC Docket No. 08-269F (where
8 Chesapeake first agreed to provide this information) allowed for this schedule to
9 be submitted under a separate cover, as it contains confidential commercial and
10 financial information. Therefore, the Company will be submitting this detail under
11 a separate cover letter.

12
13 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

14 A. Yes, it does.

DATED: SEPTEMBER 3, 2013

STATE OF DELAWARE)
)
COUNTY OF KENT)

AFFIDAVIT OF SARAH E. HARDY

SARAH E. HARDY, being first duly sworn according to law, on oath deposes and says that she is the witness whose testimony appears as "Chesapeake Utilities Corporation, Delaware Division, Direct Testimony of Sarah E. Hardy"; that, if asked the questions which appear in the text of the direct testimony, she would give the answers that are therein set forth; and that she adopts this testimony as her sworn direct testimony in these proceedings.


Sarah E. Hardy

Then personally appeared this 3rd day of September 2013 the above-named Sarah E. Hardy and acknowledged the foregoing Testimony to be her free act and deed. Before me,




Notary Public
My Commission Expires: 8-7-14